



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/646,276      | 08/22/2003  | Matthew J. Knox      | 11721-032           | 9333             |

7590

05/24/2006

Sally J. Brown  
Autoliv ASP, Inc.  
3350 Airport Road  
Ogden, UT 84405

|          |
|----------|
| EXAMINER |
|----------|

NGUYEN, PHUNG

|          |              |
|----------|--------------|
| ART UNIT | PAPER NUMBER |
|----------|--------------|

2612

DATE MAILED: 05/24/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/646,276

Applicant(s)

KNOX, MATTHEW J.

Examiner

Phung T. Nguyen

Art Unit

2612

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE \_\_\_\_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 08 February 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-3, 5-15, 17-19 and 21-33 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 9, 17 and 27-33 is/are allowed.
- 6) ☒ Claim(s) 1-3, 5-8, 10-15, 18, 19 and 21-25 is/are rejected.
- 7) ☒ Claim(s) 26 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

## **DETAILED ACTION**

### ***Claim Objections***

1. Claims 21-26 are objected to because of the following informalities:

Claims 21-26 depend from the cancelled claim 20.

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-3, 5-8, 10-15, 18, 19, and 21-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Curtis et al. (U.S. Pat. 6,623,032) in view of Barnes et al. (U.S. 2004/0011277) and further in view of Blake (U.S. Pat. 5,154,446).

**Regarding claim 1:** Curtis et al. disclose belt force sensor comprising first and second members contacting the first web surface of the seat belt; a third member located between the first and second members and contacting the second web surface of the seat belt, the third member providing a response to the tension of the seat belt; a force sensing device coupled to the third member (fig. 2, col. 3, lines 12-19). Curtis et al. teach sensing movement of the third member 36 corresponds to the tension of the seat belt but fail to teach the device being adapted to alert the operator when the response of the third member corresponds to the tension of the seat belt being within the predetermined range. However, Barnes et al. disclose seat belt tension

Art Unit: 2612

sensing device which comprises alerting the operator when the seat belt is in improper position (paragraph 0011, 0013, and 0016)). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to employ the teaching of Barnes et al. in the system of Curtis et al. because alerting the operator when the seat belt is in improper position would provide a safety system for vehicles. Curtis et al. and Barnes et al. do not teach the claimed wherein the first, second and third members cooperate to form an S-Clip. However, the use of S-Clip is old and well known in the art as taught by Blake (abstract, and col. 2, lines 47-60). Therefore, it would have been obvious to the skilled artisan to utilize the conventional S-Clip in the system of the combination if desired.

**Regarding claim 2:** Curtis et al. disclose the force sensing device including an element adapted to sense a torsional load applied to in the third member, the torsional load being created in response to the tension of the seat belt (col. 3, lines 20-32).

**Regarding claim 3:** Curtis et al. disclose the force sensing device including a printed circuit board in communication with the element as shown in figure 2.

**Regarding claim 5:** Curtis et al. disclose wherein the S-clip forms a tooth to retain the seat belt (col. 3, lines 20-22).

**Regarding claim 6:** Curtis et al. disclose wherein the first member forms a first leg of the S-clip, the second member forms a second leg of the S-clip, the third member forms a center section of the S-clip as seen in figure 2.

**Regarding claim 7:** Barnes et al. disclose a light to provide a visual alert to the operator when the tension is within the predetermined range (paragraph 0013).

**Regarding claim 8:** Barnes et al. disclose a tone generator to provide an audible alert to the operator when the tension is within the predetermined range (paragraph 0013).

**Regarding claim 10:** Curtis et al. inherently disclose the force sensing device including a biasing member coupled to the third member as seen in figure 2.

**Regarding claim 11:** Curtis et al. disclose wherein the third member is displaced in response to the tension in the seat belt (col. 3, lines 20-32).

**Regarding claim 12:** Curtis et al. and Barnes et al. and Blake do not show wherein the first member includes a roller for contacting the seat belt. However, it would be obvious to the skilled artisan to have the member including a roller for easily contacting the seat belt.

**Regarding claim 13:** Curtis et al. and Barnes et al. and Blake do not show wherein the third member is comprised of a pin assembly having a rounded head to contact the seat belt as claimed. However, it would be obvious to have a rounded head to contact the seat belt if desired.

**Regarding claim 14:** Refer to claim 12 above.

**Regarding claim 15:** Refer to claim 12 above.

**Regarding claim 18:** Blake discloses wherein the first, and third member are oriented in a S shaped configuration (abstract).

**Regarding claim 19:** All the claimed subject matter is already discussed in respect to claim 1 above.

**Regarding claim 21:** Refer to claim 5 above.

**Regarding claim 22:** Refer to claim 6 above.

**Regarding claim 23:** Refer to claim 3 above.

**Regarding claim 24:** Refer to claim 7 above.

Art Unit: 2612

**Regarding claim 25:** Refer to claim 8 above.

***Allowable Subject Matter***

4. Claims 9, 17, and 27-33 are allowed.

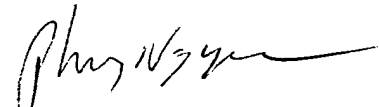
***Conclusion***

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phung T Nguyen whose telephone number is 571-272-2968. The examiner can normally be reached on 8:00am-5:30pm Mon thru. Friday, with alternate Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel J. Wu can be reached on 571-272-2964. The fax numbers for the organization where this application or proceeding is assigned is 571-273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 571-272-2600.

Phung Nguyen



Date: May 18, 2006